

1ST AND 2ND ORDERS  
 PROCESSES AND PROPERTIES INDEX  
 3RD AND 4TH ORDERS

LAPTEV, N. G.

Xylene dyes. I. B. Gursich, N. G. Laptev, A. M. Fomicheva and K. K. Magaram. Russ. Zh. Khim., April 1947. Benzaldehyde-2,4-disulfonic acid obtained by oxidation of toluenedisulfonic acid with  $MnO_4$  is partially neutralized and then condensed with a tertiary aromatic amine.

ASD-5LA METALLURGICAL LITERATURE CLASSIFICATION

LAPTEV, N. G.

USSR/Chemistry - Organic Compounds  
Chemistry - Nitration

PA

Apr 48

"Oxide Nitration of Aromatic Nitrogen Compounds and Arylhydroxylamines," A. I. Titov, N. G. Laptev, Mil Acad Imeni K. Ye. Voroshilov and the Sci Res Inst of Org Products and Dyes imeni K. Ye. Voroshilov, 6 $\frac{1}{2}$  pp

"Zhur Obshch Khim" Vol XVIII (LXXX), No 4

Shows that aromatic nitroso compounds and arylhydroxylamines, when subjected to the action of nitric acid, can undergo a varied series of transformations. Describes compounds formed and suggests reaction mechanism, Submitted 14 Mar 1946.

PA 8/49T49

C-  
LAPTEV, N.G.

Mechanism of the catalytic nitration of aromatic compounds in the presence of mercury salts. II. General theory of the reaction. Transformation of arylmercury compounds in reaction with nitric acid. A. I. Titov and N. G. Laptev. *J. Gen. Chem. U.S.S.R.* 10, 229-39 (1949) (Engl. translation).—See *C.A.* 43, 6585c.

F. J. C.

LAITEV, N. 6.

**Mechanism of catalytic nitration of aromatic compounds** in the presence of mercury salts. II. General theory of reactions. Transformation of arylmercury compounds in reactions with nitric acid. A. I. Titov and N. G. Laptev; Zhur. Obshch. Khim. (J. Gen. Chem.), 19, 267-78 (1949); cf. C.A., 43, 3340c; 43, 5012a.—It has been shown that during nitration of aromatic Hg derivs. by HNO<sub>3</sub>, in the presence of N oxides there are formed benzoyl-, diazo compds., or their transformation products (NO<sub>x</sub>-nitroso compds., nitrophenols, nitrosodialkylhydrazines, diazo compds., and β-dinitro compds.). Addn. of 3 g. diethylamine, and β-dinitro compound to 10 ml. dioxalanes, and 0.5 g. trioxymethylene over 1.5 hrs. (β-MeC<sub>6</sub>H<sub>4</sub>)<sub>2</sub>Hg and 0.5 g. trioxymethylene over 1.5 hrs. l-HNO<sub>3</sub> (d. 1.42) and 0.5 g. trioxymethylene contained at -2°, stirring 0.5 hr.; and residual liquid contained 85% p-nitrotoluene, m. 48°; the same reaction run at 65° yields much β-MeC<sub>6</sub>H<sub>4</sub>NO<sub>2</sub>. Increase of the HNO<sub>3</sub> concentration detected by odor). The use of 0.8 β-MeC<sub>6</sub>H<sub>4</sub>NO<sub>2</sub>; p-tolyldiazonium salt was detected in the conducted at 10° gave 60%; p-ONC<sub>6</sub>H<sub>4</sub>Me and a trace of residual soln. but nitrocresols were absent. The use of 0.8 β-(ClCH<sub>2</sub>)<sub>2</sub>Hg in the 1st expt. at 10–20° (2 hrs.) gave residual soln. but nitrocresols were present. The NO deriv. is obtained in good yields up to 20–30%, while about 60% p-ONC<sub>6</sub>H<sub>4</sub>C<sub>6</sub>H<sub>4</sub>OAc is obtained. m-Ch<sub>3</sub>NH<sub>2</sub> after 3 hrs.

at 40° gave 2.3 g. of a mixt. of  $m\text{-ONC}_6\text{H}_4\text{NO}_2$  and  $m\text{-ClC}_6\text{H}_4\text{NO}_2$ ; nitrophenols were absent.  $\text{PhHgOAc}$  (0.5 g.) in 10 ml.  $\text{HNO}_3$  (d. 1.2) treated to  $\text{PhN}_2\text{NO}_2$  (detected by gave almost 100% conversion to  $\text{PhN}_2\text{NO}_2$  (detected by titration with 2- $\text{C}_6\text{H}_4\text{OH}$ ), which was stable on standing for several days.  $o\text{-ClC}_6\text{H}_4\text{HgOAc}$  (1 g.) in 15 ml.  $\text{HNO}_3$  (d. 1.2) treated with  $\text{NO}$  45 min. at 45° similarly gave a soln. of  $o\text{-ClC}_6\text{H}_4\text{N}_2\text{NO}_2$ , which was quite stable even on heating; after 33 hrs. at 85° it gave 0.18 g. 6,2,4- $\text{Cl}(\text{O}_2\text{N})_3\text{C}_6\text{H}_2$ ,  $m$ , 110°, while 23.5% of the diazonium salt remained undecompd. The  $m\text{-Cl}$  isomer gave 78% ( $o\text{-MeC}_6\text{H}_4\text{OH}$ ,  $m$ , 110°, and a mixt. of  $o\text{-MeC}_6\text{H}_4\text{N}_2\text{NO}_2$  and  $o\text{-MeC}_6\text{H}_4\text{NO}_2$  in 1.5 hrs. at 20°).  $o\text{-MeC}_6\text{H}_4\text{HgOAc}$  (1 g.) and 0.3 g. trioxymethylene added in 60 min. to 25 ml.  $\text{HNO}_3$  (d. 1.1) and 0.1 g. trioxymethylene ( $o\text{-MeC}_6\text{H}_4\text{N}_2\text{NO}_2$ ) and stirred 1 hr. gave upon distn. 0.10 g. of  $o\text{-MeC}_6\text{H}_4\text{NO}_2$  and 0.83-4° and a mixt. (0.1 g.) of  $o\text{-MeC}_6\text{H}_4\text{NO}_2$  and  $o\text{-MeC}_6\text{H}_4\text{NO}_2$ . At low temps. the reaction gave the corresponding diazonium salt. Addn. of 2 g. ( $o\text{-MeC}_6\text{H}_4\text{N}_2\text{NO}_2$ ) and 0.2 g. trioxymethylene in 0.5 hr. to 10 ml.  $\text{HNO}_3$  (d. 1.4) and 0.2 g. trioxymethylene at 40° and warming 0.5 hr. on a steam bath after the addn. of 5 ml.  $\text{HNO}_3$  (d. 1.5) gave after steam distn. 0.83 g.  $o\text{-MeC}_6\text{H}_4\text{NO}_2$  and 0.28 g.  $o\text{-MeC}_6\text{H}_4\text{NO}_2$  in the residue. Addn. of 3 g.  $o\text{-ClC}_6\text{H}_4\text{HgOAc}$  to 6 ml.  $\text{HNO}_3$  (d. 1.38) and 0.1 g. trioxymethylene at 40-50° and stirring 1 hr. at 80° gave 0.9 g. 4,6-dinitro-3-chlorophenol (I),  $m$ , 89-90°, about 5% of the diazonium salt (in soln.).

and a small amt. of  $\alpha$ - $\text{O}_2\text{NC}_6\text{H}_4\text{Cl}$ , m. 29-31°; when the reaction was run 5 hrs. at 80°, steam distn. of the dihd. mixt. gave 22%  $\alpha$ - $\text{O}_2\text{NC}_6\text{H}_4\text{Cl}$  and a little I, as well as 1.3 g. mixed dinitro- and trinitrochlorophenols, which on treatment with fuming  $\text{HNO}_3$  gave 2,4,6-trinitro-3-chlorophenol, m. 113-15°. Addn. of 1 g.  $\alpha$ - $\text{ClC}_6\text{H}_4\text{HgOAc}$  to 5

ml. 68%  $\text{HNO}_3$ , warming to 85° over 0.5 hr., and stirring 10 min. gave a little  $\alpha$ - $\text{O}_2\text{NC}_6\text{H}_4\text{Cl}$  and 0.18 g. I.  $\alpha$ - $\text{ClC}_6\text{H}_4\text{HgOAc}$  (5.2 g.) added slowly to 14 ml.  $\text{HNO}_3$  (d. 1.37) and 0.3 g. trioxymethylene at 50° and kept 1 hr. gave 20%  $\alpha$ - $\text{O}_2\text{NC}_6\text{H}_4\text{Cl}$ , m. 43-4°, and 2.6 g. 4,6-dinitro-2-chlorophenol, m. 110-11°.  $\text{PhHgOAc}$  (3 g.), added in 1 hr. at 0° to 16 ml.  $\text{HNO}_3$  (d. 1.36) and 0.3 g. trioxymethylene, in mixt. with 0.6 g. of the latter, gave after 1 hr. 0.5 g. 2,4-( $\text{O}_2\text{N}$ ) $_2\text{C}_6\text{H}_3\text{OH}$  and 0.42 g. fusd. solid, probably analogous to such products obtained from  $\text{PhNO}_2$ ; no diazonium salt was detected. G. M. Kosolapoff

LAPTEV, N. G.

CA

13

Oxidative nitration of 1- and 2-naphthylmercury nitrates. Mechanism of nitration of naphthalene by nitric acid. A. I. Titov and N. G. Laptev. *Doklady Akad. Nauk S.S.S.R.* 66, 1101-3 (1970); cf. C.I. 43, 6585. 1- and 2-C<sub>10</sub>H<sub>7</sub>HgNO<sub>3</sub> under the action of concd. HNO<sub>3</sub> in the presence of N oxides are transformed into 2,4-dinitro-1-naphthol in over 80% yields; nitration of C<sub>10</sub>H<sub>8</sub> by HNO<sub>3</sub> which proceeds via intermediate reaction with NO<sub>2</sub> does not go through a nitroso deriv. Equimolar amts. of 1-C<sub>10</sub>H<sub>7</sub>HgCl and AgNO<sub>3</sub> in warm Me<sub>2</sub>CO-EtOH give the corresponding nitrate, m. 137-8°. This (2 g.) added at 30-40° in 0.5 hr. to 13 ml. HNO<sub>3</sub> (d. 1.3) with 0.2 g. trioxymethylene, kept 1 hr. at 40-50°, and cooled, gave 0.8 g. crude 2,4-(O<sub>2</sub>N)<sub>2</sub>C<sub>10</sub>H<sub>7</sub>OH (pure, m. 134-6°), isolated by extrn. with 5% NaOH and acidification; the residual soln. gave on steam distn. 0.8% (0.06 g.) 1-O<sub>2</sub>NC<sub>10</sub>H<sub>7</sub>, m. 53-5°. 2-C<sub>10</sub>H<sub>7</sub>HgNO<sub>3</sub>, m. 203°, similarly gave 55.1% 2,4-dinitro-1-naphthol and no O<sub>2</sub>NC<sub>10</sub>H<sub>7</sub>. The following reaction mechanism is proposed (R = C<sub>10</sub>H<sub>7</sub> nucleus): 1-RHgNO<sub>3</sub> + (N<sub>2</sub>O<sub>4</sub>) → 1-RNO + (H<sup>+</sup>) → 1-RHNO + (H<sub>2</sub>O) → 1,4-R(HNOH)(OH) + (NO<sub>2</sub>) → 1,4-R(NO)-OH + (NO<sub>2</sub>) → 1,4-R(NO<sub>2</sub>)OH + (NO<sub>2</sub>) → 1,2,4-R(NO<sub>2</sub>)<sub>2</sub>OH; with the 2-HgNO<sub>3</sub> isomer the process is similar and a 1,2-(NH<sub>2</sub>OH)OH intermediate forms. The results indicate that nitration of C<sub>10</sub>H<sub>8</sub> occurs by means of NO<sub>2</sub> monomer, as it takes place readily at 100° in HNO<sub>3</sub> of d. 1.2 at low NO<sub>2</sub> concn. (cf. C.I. 42, 5450); if the active form were dimeric NO<sub>2</sub>, the dinitronaphthol should have been detected; this is not the case, except in minute amts. G. M. Kosolapoff.

LAPTEV, N.G.

BOGOSLOVSKIY, Boris Mikhaylovich; LAPTEV, Nikolay Grigor'yevich;  
BORODKIN, V.F., retsenzent; MORYGANOV, P.V., retsenzent;  
CHEKALIN, M.A., retsenzent; VARSHAVSKAYA, L.S., red.; KOGAN, V.V.,  
tekhn.red.

[The chemistry of dyes] Khimiia krasitelei. Moskva, Gos.nauchno-  
tekhn.izd-vo lit-ry po legkoi promyshl., 1957. 433 p. (MIRA 11:1)  
(Dyes and dyeing--Chemistry)

LAPTEV, N.G.

Oxidizing nitration of aromatic hydrocarbons. *Reakts.org.*  
seed. 7:223-254 '58. (MIRA 12:5)  
(Aromatic compounds) (Nitration)



TITOV, A.I.; LAPTEV, N.G.

Achievements and problems of the investigation of the oxidizing  
nitration of aromatic compounds. Org. poluprod. i kras. no.1:5-  
39 '59.

(MIRA 14:11)

(Aromatic compounds)  
(Nitration)

BOGOSLOVSKIY, Boris Mikhaylovich [deceased]; LAPTEV, Nikolay Grigor'yevich;  
CHEKALIN, M.A., retsenzent; VERBITSKAYA, Ye.M., red.; KNAKIN, M.F.,  
tekhn.red.

[Chemistry of dyes] Khimiia krasitelei. Moskva, Izd-vo nauchno-  
tekhn.lit-ry RSFSR, 1960. 279 p. (MIRA 14:1)  
(Dyes and dyeing)

LAPTEV, N.G.; LARYUSHKINA, V.K.

Powered pigments suspended in oil and lates for the rubber industry. Kauch.i rez. 19 no.1:22-24 Ja '60.

(MIRA 13:5)

1. Nauchno-issledovatel'skiy institut rezinovykh i lateksnykh izdeliy.

(Dyes and dyeing--Rubber goods)

LAPTEV, N.G.; VYSOKOSOV, A.N.; MEREZHKOVA, I.A.

4-Carbamoylanilide of acetoacetic acid in connection with the  
synthesis of migration-stable monoazo pigments. Zhur.VKHO 7  
no.1:110-111 '62. (MIRA 15:3)

1. Nauchno-issledovatel'skiy institut organicheskikh poluproduktov  
i krasiteley.  
(Acetoacetic acid) (Azo compounds) (Dyes and dyeing)

LAPTEV, N.G.; VYSOKOSOV, A.N.

Migration-stable yellow monoazo pigments. Zhur. VKHO 7  
no.6:698-700 '62. (MIRA 15:12)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut  
organicheskikh poluproduktov i krasiteley.  
(Azo dyes)

I 9699-66 EWT(m)/EWP(i) RM

ACC NR: AP5026527

SOURCE CODE: UR/0286/65/000/019/0069/0069

AUTHORS: Laptev, N. G.<sup>44</sup> Mesbchaninova, Z. S.<sup>44</sup>

ORG: none

TITLE: Method for obtaining brightly colored light-fast solid resins. Class 39, No. 175223<sup>5</sup> /announced by State Scientific Research Institute for Organic Intermediates and Dyes (Gosudarstvennyy nauchno-issledovatel'skiy institut organicheskikh poluproduktov i krasiteley)<sup>7</sup>

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 19, 1965, 69

TOPIC TAGS: resin, polymer, dye chemical, formaldehyde, pigment

ABSTRACT: This Author Certificate presents a method for obtaining brightly colored light-fast solid resins by condensing amino-group containing compounds with formaldehyde and a dyestuff.<sup>5</sup> To obtain light-fast resins (pigments), polymethine dyes are used in the condensation.

SUB CODE: 11/

SUBM DATE: 11Apr64

Card 1/1

UDO: 678.6.047.668.819.45

L 24516-66 EWT(m)/EWP(j)/T IJP(c) RM  
ACC NR: AP6009525 (A) SOURCE CODE: UR/0413/66/000/005/0049/0049

AUTHOR: Laptev, N. G.; Shemtova, M. R.; Tabachnikova, N. I.;  
Klimova, T. S. 23  
B

ORG: none

TITLE: Preparation of light-resistant, migration-resistant, and heat-resistant varnishes. Class 22, No. 178404 [announced by the Scientific-Research Institute for Organic Semifinished Products and Dyes (Nauchno-issledovatel'skiy institut organicheskikh poluproduktov i krasiteley)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 5, 1966, 49

TOPIC TAGS: varnish, heat resistant varnish, light resistant varnish, migration resistant varnish

ABSTRACT: An Author Certificate has been issued describing a method for obtaining light-resistant, migration-resistant, and heat-resistant varnishes made with sulfonated linear quinacridone. To produce varnishes suitable for coating plastics, rubber, and film-forming compounds, the sulfonated linear quinacridone, either in the form of a water solution of the free acid or in the form of a water-soluble

Card 1/2

UDC: 667.636.44/46

I 24516-66

ACC NR: AP6009525

0

salt is treated with the water solution of one of the salts of the first, third, and eighth metal group, whereby the process is conducted in the presence of dispersion agents. [LD]

SUB CODE: 11/

SUBM DATE: 05Jan65/

2/9  
Card

Bl-C



LAPTEV, N.M.

Ways of increasing labor productivity at the Magnitogorsk  
Metallurgical Combine. Stal' 21 no.10:945-948 0 '61. (MIRA 14:10)  
(Magnitogorsk--Metallurgical plants)

Changes in the protein fractions of the blood of schizophrenic patients receiving aminazine treatment. <sup>N. N.</sup>  
 Laptev (Central Inst. Post Graduates, Moscow). <sup>12hr.</sup>  
*Neuropatol. i Psikhiatr. im. Kerenskogo* 56, 187-91 (1956).  
 Twelve patients with different forms of schizophrenia were given aminazine therapy and the changes in the blood serum constituents studied by the method of electrophoresis. The total blood serum protein increased. At the same time a shift took place in the compn. of the serum protein in the direction of the coarsely dispersed globulins, which was a reflection of the increase in the  $\beta$ - and  $\gamma$ -globulins. An increase in the two types of  $\alpha$ -globulins was also observed in the majority of the schizophrenic patients studied. The increase in the serum globulins follows a wavelike pattern: the first fluctuation wave shows a lowering in the albumin with a simultaneous increase in the  $\alpha_1$ -globulins in particular, but other types of globulin as well. As the therapeutic regime is progressing and the psychic improvement begins to manifest itself the levels of the blood serum protein constituents return to normal. No clear-cut correlation has been established thus far between the degree of fluctuation in the blood serum protein constituents and the extent of the patients' psychiatric improvement.  
 B. S. Levine

LAPTEV, N.N., inzh.; SEDOV, L.N., inzh.

Prospects for improving bridge-type power amplifiers. Elektro-  
tekhnika 35 no.2:54-56 F '64. (MIRA 17:3)

L 47320-65 EWT(1)/EWT(m) JD

ACCESSION NR: AP5010881

UR/0286/65/000/007/0063/0063

AUTHOR: Laptev, N. K.

TITLE: A static transformer. Class 21, No. 169659

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 7, 1965, 63

TOPIC TAGS: transformer

ABSTRACT: This Author Certificate presents a static transformer of direct current to three-phase or single-phase current (see Fig. 1 on the Enclosure). The transformer uses semiconductor triodes on the basis of a bridge circuit with

Card 1/3

ACC NR: AP7000323

SOURCE CODE: UR/0413/66/000/022/0061/0061

INVENTOR: Laptev, N. N.; Smol'nikov, L. Ye.

ORG: none

TITLE: Self-exciting inverter. Class 21, No. 188568.

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 22, 1966, 61

TOPIC TAGS: inverter, electronic circuit, transistorized circuit

ABSTRACT: An Author Certificate has been issued for a self-exciting inverter (see Fig. 1) based on thyristors either with feedback or with a tuned LC load circuit. To

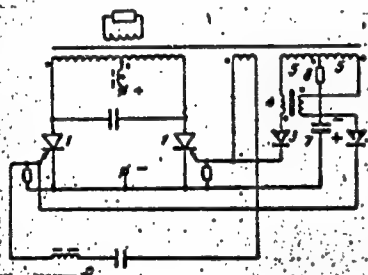


Fig. 1. Inverter

- 1 - Inverter thyristors; 2 - tuned LC circuit; 3 - isolation diodes;
- 4 - saturation coil; 5 - feedback winding; 6 - output transformer;
- 7 - tank capacitor; 8 - limiting resistor.

UDC: 621.314.  
572

Card 1/2

ACC NR: AP7000323

increase reliability and operation speed, a feedback winding is connected to the thyristor bases through isolation diodes and a saturation coil. The center top of the feedback transformer is connected to the thyristor cathodes through a tank capacitor and a limiting resistor. The feedback winding is fed by the output transformer. Orig. art. has: 1 figure.

SUB CODE: 09, 10/ SUBM DATE: 28Jan64/ ATD. PRESS: 5108

Carri 2/2

1 6992-66

ACC NR: AP5026807

SOURCE CODE: UR/0286/65/000/017/0090/0090

INVENTOR: Moin, V. S.; Nezhdanov, I. V.; Smol'nikov, L. Ye.; Laptev, N. N. 35

ORG: none 8

TITLE: A semiconductor switch. Class 42, No. 174434

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 17, 1965, 90

TOPIC TAGS: semiconductor device, electric switch

ABSTRACT: This Inventor's Certificate introduces a semiconductor switch based on a *p-n-p-n* structure. Switching time from the "on" to the "off" state is reduced by connecting a diode between the *n*-regions with the anode connected to the *n*-emitter and the cathode connected to the *n*-base, while a second diode is connected between the *p*-regions with the anode connected to the *p*-base and the cathode connected to the *p*-emitter.

SUB CODE: EC/ SUBM DATE: 29Apr62/ ORIG REF: 000/ OTH REF: 000

Card 1/2

UDC: 681.142.07

L 6992-66

ACC NR: AP5026807

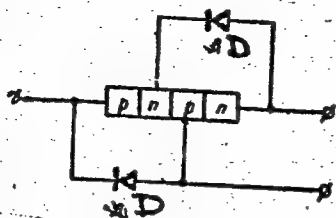


Fig. 1.

Card 2/2 *nd*



I 18591-66

ACC NR: AP6002684

SOURCE CODE: UR/0292/66/000/001/0035/0038

AUTHOR: Laptev, N. N. (Engineer); Moin, V. S. (Engineer)

ORG: none

TITLE: Dynamic losses in the transistors of an inverter

SOURCE: Elektrotehnika, no. 1, 1966, 35-38

TOPIC TAGS: inverter, transistorized inverter

ABSTRACT: A conventional 4-transistor inverter circuit in which the transistors are controlled by square pulses is considered. A 2-term formula of dynamic losses in the transistor is developed, in which the first term represents the loss associated with the inductive-resistive load and the second term, with the "overlap" effect. Connecting an additional capacitor is recommended for reducing the first loss component. An additional diode-shunted reactor in the supply circuit (or nonsaturable gates) is recommended for reducing the second loss component; the "overlap" may also be eliminated by delaying the turn-on signal with respect to the turn-off signal; such a delay permits excess carriers in the base to disappear. An experimental verification (oscillograms supplied) shows the efficiency of a combined application of the above techniques. Orig. art. has: 5 figures and 28 formulas.

SUB CODE: 09 / SUBM DATE: none / ORIG REF: 002 / OTH REF: 001

Card 1/1 *XC*

UDC: 621.382.3.001.5

L 13875-66

ACC NR: AP6005319

SOURCE CODE: UR/0413/66/000/001/0053/0053

INVENTOR: Laptev, N. N.; Smol'nikov, L. Ye.

ORG: none

TITLE: Bridge inverter. Class 21, No. 177516

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 1, 1966, 53

TOPIC TAGS: electronic component, inverter, electric energy conversion, power supply

ABSTRACT: The proposed self-excitation bridge inverter utilizes a number of parallel-connected transistors in each arm of the bridge. To prevent short circuiting of individual transistors, use is made of an auxiliary converter connected to a common power supply source. Negative feedback windings are connected through a rectifier to the

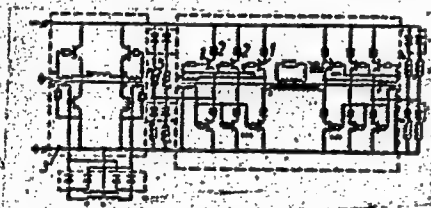


Fig. 1. Bridge inverter

1 - Basic inverter transistors; 2 - fuses;  
3 - auxiliary converter; 4 - feedback  
windings; 5 - output windings.

Cord 1/2

UDC: 621.314.572:621.316.9

L 13875-66

ACC NR: AP6005319

inputs of the transistors of the auxiliary converter. The output windings are connected in parallel through full-wave rectifiers to the transistors of each arm (see Fig. 1). Orig. art. has: 1 figure. [DW]

SUB CODE: 09/ SUBM DATE: 27May64/ ATD PRESS: 4/92

TS  
Card 2/2

L-18262-63

ACCESSION NR: AP3006645

S/0286/63/000/008/0018/0018

45

AUTHOR: Laptev, N. N.; Smol'nikov, L. Ye.

TITLE: IC relaxation oscillator. Class 21, No. 155935

SOURCE: Byul, izobreteniy i tovarny\*kh znakov, no. 8, 1963, 18

TOPIC TAGS: oscillator, relaxation oscillator, IC oscillator, IC relaxation oscillator, driven oscillator, controlled rectifier, SCR

ABSTRACT: This Author's Certificate introduces an IC relaxation oscillator operating in the driven mode which is modified to give a delayed pulse output. This is accomplished by connecting controlled rectifiers 2 and 4 and injection diode 3, as shown in Fig. 1 of the Enclosure. Orig. art. has: 1 figure.

ASSOCIATION: none

SUBMITTED: 03Nov61

DATE ACQ: 30Sep63

ENCL: 01

SUB CODE: GE

NO REF SOV: 000

OTHER: 000

Card 1/2

ACCESSION NR: AP3006645

ENCLOSURE: 61

L 18262-63

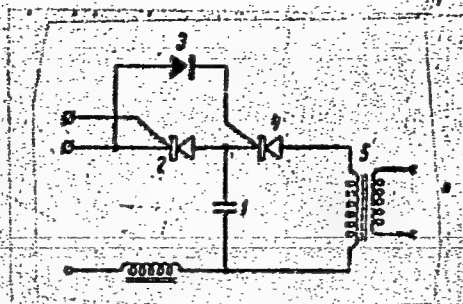


Fig. 1. LC relaxation oscillator

1 - condenser; 2 - first controlled  
rectifier; 3 - injection diode;  
4 - second controlled rectifier;  
5 - pulse transformer.

Card 2/2

1. LAPTEV, N. R.

2. USSR (600)

4. Tempering

7. Hardening cracks on ball bearings. Podshipnik no. 10, 1952.

9. Monthly List of Russian Accessions, Library of Congress, February 1953, Unclassified.

1. LAPIEV, N. R.; VASIL'YEVA, A.

2. USSR (600)

4. Cementation (Metallurgy)

7. Cementation of tools made Smk 15 steel. Podshinik, No. 11, 1952.

9. Monthly List of Russian Accessions. Library of Congress. March, 1953. Unclassified





LAPTEV, N.R., inzhener.

Standard specification and quality control for metals to be used for rolling  
anti-friction bearing parts. Podshipnik no.7:26-27 J1 '53. (MLRA 6:8)  
(Roller bearings) (Steel--Testing)

MORGUNOV, N.I., kandidat sel'skokhozyaystvennykh nauk; LAPTEV, P.I., kandidat ekonomicheskikh nauk; ZHENATOV, A.P.

Harrow-strip plowing in regions of excessive moisture. Zemledelie 4  
no.7:67-69 J1 '56. (MLRA 9:9)

1.Kaliningradskaya opytno-meliorativnaya stantsiya.  
(Flowing)

LAPTEV, Petr Ivanovich, kand. ekon. nauk; BONAREV, N., red.;  
SHLYK, M., tekhn. red.

[Transformation of social relations in villages] Pre-  
obrazovanie obshchestvennykh otnoshenii v derevne. Moskva,  
Mosk. rabochii, 1962. 70 p. (15:7)  
(Agriculture)

LAPTEV, P.N.; GINZBURG, Ya.Z.

Clinical aspect and treatment of paracystitis. Khirurgia no.9:23-26 S '53.  
(MIRA 6:11)  
(Bladder--Inflammation)

LAPTEV, P.N.; GINZBURG, Ya.Z.

Calculous pyelonephritis complicated by paranephritis with eruption  
of pus into the ascending colon. Khirurgiia no.9:69 S '53.

(MLRA 6:11)

(Kidneys--Diseases)

LAPTEV, P.H. (Vladivostok)

Nephropexy with the aid of myofascial flaps. Khirurgiia no.9:72-73  
S '54. (MLRA 7:12)

(KIDNEYS, surgery,  
nephropexy with musc. & fascial flaps)

LAPTEV, S., inzh.

In cities and on roads in England (to be concluded). Za rul.  
16 no.4:18-19 Ap '58. (MIRA 13:3)  
(Great Britain--Transportation, Automotive)

LAPTEV, S.

In Switzerland. Za rul. 18 no.9:30 S'60.  
(Motor vehicles)

(MIRA 13:10)



LAPTEV, S., kand. tekhn. nauk

Fastening disk wheels of motortrucks. Avt. transp. 41 no.3:  
46-47 Mr '63. (MIRA 16:4)

(Motortrucks--Wheels)

LAPTEV, S. A.

Avtomobil'nye pozda. [motor trains]. (Avtomobil'naia i traktornaia promyshlennost, no. 11, 50, Moskva, Mashgiz, 1948, p. 167-186).

MH

NN

DLC: TL4.A9

SO: Soviet Transportation and Communication, A Bibliography, Library of Congress Reference Department, Washington, 1952, Unclassified.

LAPTEV, S. A., Engineer

"Method for Quantitative Evaluation of the Operational Quality of Engine, Clutch and Transmission in Automobiles." Sub 21 Feb 51, Sci Council of the State Sci Res Order of Labor Red Banner Automobile and Automotive Inst (NAMI)

Dissertations presented for science and engineering degrees\* in Moscow during 1951.

SO: Sum. No. 480, 9 May 55

\* cand. Technical Sci.

LAFTEV, S. A.

Automobile Engineering Research

Quantitative method of evaluating the performance of an automobile and its mechanisms Avt. trakt. prom. no. 4, April 1952.

9. Monthly List of Russian Accessions, Library of Congress, August 1953<sup>2</sup>, Uncl.

LAPTEV, S. A.

7851. LAPTEV, S. A. Vesovyye parametry i metodika vzveshivaniya avtomobiley. m., 1954. 8s. 29sm. (m-vo avtomob., trakt. I s.-kh. mashinostroyeniya sssr. Gos. soyuznyy ordena trud. krasnogo znameni nauch.--issled. avtomob. I avtomotorny in-t NAMI Listok tekhn. informatsii. No 37). 300 ekz. B. Ts. --(55-798zh)

SO: Knizhuaya Letopis', Vol. 7, 1955

**LAPTEV, S., kandidat tekhnicheskikh nauk.**

Devices for checking air pressure in tires when the car is  
in motion. Avt.transp. 32 no.7:31-33 J1 '54. (MLRA 7:9)  
(Tires, Rubber) (Automobiles--Apparatus and supplies)

LAPTEV, S. A.  
USSR/ Scientific Organization

Card 1/1 Pub. 128 - 12/23

Authors : Laptev, S. A.

Title : Increasing the work efficiency of Industrial Scientific Research Institutes

Periodical : Vest. mash. 2. 80 - 83, Feb 1955

Abstract : Problems related to the improvement of planning and research work, as well as the organization of scientific research institutes are discussed, and a critical review is presented of the substandard operation and inefficiency of certain institutes.

Institution: .....

Submitted: .....

LAPTEV, S.

LAPTEV, S. Devices for checking air pressure in the tires while the automobile is moving. Tr. from Russian. p. 12.  
Competition in rationalization. p. 15.

Vol. 6, No. 8, Aug. 1956.

RATSIONALIZATSIIA.

TECHNOLOGY

Sofia, Bulgaria

So: East European Accession, Vol. 6, No. 3, March 1957



LAPTEV, S., inzh.

Through the cities and over the roads in England. Za rul. 16 no.6:19  
Je. '58. (MIRA 11:9)

(Great Britain--Automobiles--Touring)

LAPTEV, S., inzh.

Competitions of automobile train drivers. Za rul. 16 no.9:23  
S '58. (MIRA 11:10)  
(Automobile trains)

LAPTEV, S., kand. tekhn. nauk

Experience in supplying automobiles with spare parts abroad. Avt.  
transp. 36 no. 7:57-58 J1 '58. (MIRA 11:8)

(Automobiles--Maintenance and repair)

LAPTEV, S., inzh.

Through our country in the new automobile. Za rul. 17 no.1:13-14  
Ja '59. (MIRA 12:3)

(Automobiles--Testing)

LAPTEV, S., inzh.

Prevent skidding. Za rul. 17 no.3:16 Mr '59. (MIRA 12:5)  
(Automobiles--Cold weather operation)

LAPTEV, S., kand.tekhn.nauk

Mechanizing warehouses stocking automobile spare parts. Avt.  
transp. 37 no.4:58-59 Ap '59. (MIRA 12:6)  
(Dagenham (Great Britain)--Automobiles--Apparatus and supplies)

LAPTEV, S., kand. tekhn. nauk

New automobile headlights. Avt. transp. 37 no.10:57-58 0 '59.  
(MIRA 13:2)

(Automobiles---Lighting)

LAPTEV, S.A., kand. tekhn. nauk; GERASIMOVA, T.N., red.; CHERNIKOVA, M.Z.,  
tekhn. red.

[The 1960 automotive exhibit in Geneva] Avtomobil'naiia vystavka  
1960 goda v Zheneva. Moskva, Tsent. biuro tekhn. informatsii,  
1960. 31 p. (MIRA 14:7)  
(Automobiles—Exhibitions) (Geneva—Exhibitions)



LAPTEV, Sergey Aleksandrovich, kand. tekhn. nauk; BUDANOV, V.P., inzh.,  
retsenzent; NAKHIMSON, V.A., red. izd-va; TIKHANOV, A.Ya.,  
tekhn. red.

[Road testing of automobiles] Dorozhnye ispytaniia avtomobi-  
lei. Moskva, Mashgiz, 1962. 314 p. (MIRA 15:12)  
(Automobiles—Testing)

LAPTEV, S. P.

LAPTEV, S. P.: Author's abstract of a dissertation "On the interrelationship between flotation reagents and noble metals" presented toward the academic degree of Candidate of Technical Science. Moscow, 1955. Min Higher Education USSR, Moscow Inst of Nonferrous Metals and Gold imeni M. I. Kalinin. (Dissertation for the Degree of Candidate of Technical Sciences)

SO: Knizhnaya Letopis', No. 40, 1 Oct 55

Laptev S.F.

MC The fixation of xanthate on silver prior to flotation. S. F. Laptev and I. N. Plaksin. *Izvest. Akad. Nauk S.S.S.R. Otdel. Tekh. Nauk* 1955, No. 10, 117-28. The fixation of xanthate to the Ag surface and the strength of the fixation were detd. by measuring the H overvoltage, and the results indicate that xanthate does not interact with a surface not previously activated by O, or when O<sub>2</sub> is absent in the reaction. The xanthate ion is fixed on the Ag surface by a chem. combination with it, with the formation of Ag xanthate. A polymol. film of Ag xanthate is formed with an extensive Ag surface oxidation, and can become readily detached from the Ag and colloiddally dispersed in the soln. W. M. S.

LAPTEV, S. F.

Category: USSR

B-13

Abs Jour: RZh-Kh, No 3, 1957, 7710

Author : Laptev, S. F. and Palksin, I. N.

Inst : Academy of Sciences USSR

Title : Investigation of the Effect of Sodium Sulfite on the Interaction of Xanthates with the Surface of Noble Metals

Orig Pub: Izv. AN SSSR, Section on Industrial Sciences, 1956, No 6, 126-135

Abstract: The radioactive tracer method was used in the investigation of the reaction of  $\text{Na}_2\text{S}^{35}\text{I}$  (I) in solution as a flotation reagent regulator with the surface of Pt, Au, Ag, Cu, and their alloys as well as the effect of I on the adsorption on these surfaces of the collector-reagent, potassium butylxanthate,  $\text{C}_4\text{H}_9\text{OCSS}^{35}\text{Na}$  (II) [sic]. It is shown that in the presence of oxygen from the atmosphere the metals can be arranged in the following series according to their activity with  $\text{HS}^-$  and  $\text{S}^{2-}$  ions:  $\text{Ag} > \text{Au} > \text{Pt}$ ; the alloys occupy intermediate positions in the series. In the absence of  $\text{O}_2$ , Au does not react with I. When I and II are both present in solution, the reactions of Au

Card : 1/2

-10-

Category: USSR

B-13

Abs Jour: RZh--Kh, No 3, 1957, 7710

and Ag with II are suppressed, a greater concentration of I being required in the case of Ag than in the case of Au. This depression is not caused by the  $HS^-$  ions but by the  $S^{2-}$  ions which displace II from the surface of the metal, as has been confirmed by direct desorption experiments and by the space exchange reaction between a suspension of butyl potassium xanthate and I which results in the formation of a suspension of the less soluble  $Ag_2S$ . The elution of polymolecular adsorbed layers of II from Ag surfaces by solutions of I of varying concentrations shows that the destruction of the film is not uniform over the surface and is gradual, the outer layers being removed first so that as the film thickness approaches that of the monolayer adhering to the surface, greater concentrations of I are required for the removal of II. The monolayer appears to be the most resistant portion of the film.

Card : 2/2

-11-

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R000928630001-2

SOV/136-58-10-12/27

AUTHOR: Laptev, S.F.

TITLE: Recovery of Cinnabar from Rotatory Furnaces in Mercury Works (Iz vlecheniye kinovari iz pyley vrashchayushchikhsya pechey rtutnykh zavodov)

PERIODICAL: Tsvetnyye Metally, 1958, Nr 10, pp 56 - 61 (USSR)

ABSTRACT: The return of rotary-furnace dust for re-treatment is not an efficient way of recovering the mercury content (up to 0.15% Hg). The author describes recovery tests at the Nikitovka Mercury Works in which A.A. Ignat'yev participated. The tests were carried out with dust from the dust chambers (0.141% Hg, 38.99% Si, 4.99% Fe, 4.59% Al, 0.32% Ca, 0.3% Mg, 0.27% Ti, 0.02% Cu, 0.005% Ni, 0.51% S total, 0.20% sulphate S) and from cyclones (0.151% Hg, 36% Si, 2.24% Fe, 0.53% Al, 0.557% Ca, 0.51% Mg, 0.38% S total, 0.10% sulphate S). Stirring of samples of the dusts with distilled water gave solutions containing ions (such as iron ions) which hinder flotation (Table 3). Preliminary tests showed that while gravitational methods of concentration were unsuitable, flotation was effective, and subsequent work was devoted to finding optimal flotation conditions. The best collectors were xanthates and a mixture of ethyl xanthate with aerofloat. The authors note

Card 1/2

SOV/136-58-10-12/27  
Recovery of Cinnabar from Rotatory Furnaces in Mercury Works

that while their article was awaiting publication, one by Khukhunayshvili appeared (Tsvetnyye Metally, 1958, Nr 5) recommending the use of flotation reagent, type OP-10, for cinnabar flotation. As this reagent has both collecting and foaming properties and is much cheaper than those used by the authors, they suggest that the schemes proposed by them (e.g. Figure 1), although effective, can be advantageously replaced by a simpler one using the OP-10 reagent. There are 4 figures, 6 tables and 4 Soviet references.

Card 2/2

LAPTEV, S.R.

~~Regional studies work with students of higher classes. Geog.v~~  
shkole no.2:58-60 Mr-Ap '54. (MLRA 7:2)  
(Geography--Study and teaching)

LAPTEV, S. R.

Translation from: Referativnyy zhurnal, Geografiya, 1957, Nr 7,  
p 7 (USSR) 14-57-7-14215

AUTHOR: Laptev, S. R.

TITLE: Young Naturalists Study Their Own Region (Krayeved-  
cheskaya rabota yunikh naturalistov)

PERIODICAL: Izv. Omskogo otd. geogr. o-va SSSR, 1956, Nr 1 (8),  
p 85

ABSTRACT: Bibliographic entry  
Card 1/1



LAPTEV, S.R. (Omsk)

Exchange excursions as a form of extracurricular activity.  
Geogr. v shkole 19 no.3:54-55 My-Je '56. (MLRA 9:9)  
(School excursions)

LAPTV, S.R.

Rare natural phenomenon of clay balls. Izv. Omsk. etn. Soc. 1957.  
no. 2: 127-129 '57. (ILL. 1:1)

(Omsk Province--Geology--Curiosa and miscellany)

LAPTEV, S.R., uchenyy sekretar'

Annual report of the Omsk Branch of the All-Union Geographic Society  
for 1956. Izv. Omsk. otd. Geog.ob-va no.2:145-147 '57.

(MIRA 12:7)

(Omsk--Geographical societies)

EPSHTEYN, V.V. [deceased]; LAPTEV, S.R.

Lake Ul'dzhay. Izv. Omsk. otd. Geog. ob-va no.5:37-43 '63.  
(MIRA 17:5)

LAPTEV, S.R.

Balneological possibilities of Omsk Province. Izv. Omsk.  
otd. Geog. ob-va no.5:31-33 '63.

Traces of falling water level in the Om' and the Irtysh  
Rivers. Ibid.:184-185 (MIRA 17:5)

LAPTEV, S.R.; ABROSIMOVA, Ye.K.

Some mineralized lakes in the southern part of Omsk Province.  
Izv. Omsk. otd. Geog. ob-va no.5:49-54 '63. (MIRA 17:5)

BREK, B.M., inzh.; IZVEKOV, G.M., inzh.; LAPTEV, T.I., inzh.

Using the tensiometric method for determining the specific pressure of compaction. Torf.prom. 39 no.4:30-33 '62.

(MIRA 15:7)

1. Upravleniye Gorenergo (for Brek, Izvekov). 2. Gor'kovskaya laboratoriya ispytaniya materialov (for Laptev).

(Briquets (Fuel))

(Peat machinery—Testing)

LAPTEV, V.

Seminar on the mechanization of operational processes in  
irrigation farming of the arid zone of the R.S.F.S.R. Gidr. 1  
mel. 15 no.2:55 F '63. (MIRA 16:4)

1. Astrakhanskaya sel'skokhozyaystvennaya opytnaya stantsiya.  
(Irrigation—Congresses)



LA TEV, V.

Planning and the rights of enterprises. Vop. ekon. no.6:26-31  
Je '63. (MIRA 16:6)  
(Russia--Economic policy) (Industrial management)

LAPTEV, V.A.

Amplifiers without differential systems in selective communication systems. Avtom., telem.i svyaz' 7 no.3:26-29 Mr '63.

(MIRA 16:2)

1. Starshiy inzh. laboratorii svyazi Moskovskoy dorogi.  
(Railroads--Communication systems)  
(Railroads--Electronic equipment)

KOVACHIN, B.I., cand. techn. nauk; LAPTEV, V.I., aspirant

Increasing the stability of narrow-gauge continuous rail tracks.  
Izv. Akad. Nauk. SSSR no. 9:20-22 1965. (MIRA 18:9)

OVINNIKOV, A.I.; LAPTEV, V.A.

Dispatcher-to-train radio communication with harmonic selective  
signaling. Avtom., telem. i. svyaz' 7 no.11:34-35 N '69.

(MIRA 16:12)

1. Starshiye inzheneriy laboratorii signalizatsii i svyazi  
Moskovskoy dorogi.

ACC NR: AP7002241

SOURCE CODE: UR/0280/66/000/006/0110/0115

AUTHOR: Laptev, V. A. (Kiev); Milen'kiy, A. V. (Kiev)

ORG: none

TITLE: On the separation of patterns in the self-learning regime

SOURCE: AN SSSR. Izvestiya. Tekhnicheskaya kibernetika, no. 6, 1966, 110-115

TOPIC TAGS: pattern recognition, self learning *mechanism*, ~~system, compactness criterion~~, pattern separation criterion

ABSTRACT:

This article deals with the problem of pattern recognition in a self-learning regime using statistical decision theory. It is assumed that every recognized pattern is characterized by a definite number  $R$  of features which can be expressed by numbers. The realization of a certain pattern is represented by a vector or a point in an  $R$ -dimensional metric space whose coordinates are random numbers which obey certain probability distribution laws. These characters can be statistically dependent and patterns in the space of features can intersect. It is required to separate the set of realizations into two subsets and to determine that minimum of the apriori information necessary to do this operation. The concept of mutual compactness of patterns is introduced and two measures of compactness are established.

UDC: none

Card 1/2

ACC NR: AP7002241

Those two supplementary measures are united into one criterion of compactness which is used not only as the measure of compactness, but also for separating the incoming realizations into two classes. The algorithm for successive separation of patterns is presented on the basis of the criterion of mutual compactness. Some experimental results from testing the derived algorithm on a digital computer are presented. Analysis of a large amount of experimental data made it possible to draw the following conclusions: 1) If patterns have approximately the same statistical characteristics, separation by means of the derived algorithm is very close to optimal. When the difference in statistical characteristics is significant, separation deteriorates; however, the less this deterioration, the better the compactness of patterns will be. 2) An increase in the number of features is not always useful. An improvement in separation is attained only when every feature increases the mutual compactness of patterns. Orig. art. has: 3 figures and 7 formulas.

SUB CODE: 09/ SUBM DATE: 01Oct65/ ORIG REF: 006/ OTH REF: 001/  
 ATD PRESS: 5112

Card 2/2

LAPTEV, V. B.

USSR/Radio - Phonograph  
Amplifiers

May 51

"Very Simple Phonograph Amplifier," V. B. Laptev,  
Moscow

"Radio" No 5, p 61

Describes one-tube 6AG7 (6P9) phonograph amplifier.  
Plate and screen grid are fed from 6X5 (6Ts5S)  
rectifier. Output power of amplifier is about 2 w.  
Loudspeaker type 2-GDM-3 is used.

182T112

NURAYEV, R.A.. glavnyy veterinarnyy vrach Karabekaul'skogo rayona, Chardzhouskoy oblasti; LAPTEV, V.I., starshiy veterinarnyy vrach.

Use of mounted tank vessels in veterinary medicine. Veterinariia 33  
no.8:80-81 Ag '56. (MLRA 9:9)



OVCHINNIKOV, F.V., inzh.; LAPTEV, V.I., inzh.; SADOVOY, P.N., inzh.

Extinguishing methane fire in longwalls. Bezop.truda v prom. 3  
no.3:24-25 Mr '59. (MIRA 12:4)  
(Donets Basin--Coal mines and mining--Fires and fire prevention)

ABRAMOV, I. V.; LAPTEV, V. I.

"Sur la parthenogenese chez la tique *Haemaphysalis neumanni* (type *bispispinosa*)."  
report submitted for 1st Intl Cong, Parasitology, Rome, 21-26 Sep 1964.  
Inst of Experimental Veterinary Medicine, Moscow G-378.

LAPTEV, V.K.; KHROMOV, P.M.

New mixture composition for coating centers and extensions.  
Shor.rats.predl.vnedr.v proizvod. no.1:12 '61. (MIRA 14:7)

1. Azerbaydzhanskiy truboprokatnyy zavod.  
(Protective coatings)

S/130/61/000/001/001/006  
A006/A001

AUTHOR: Laptev, V. K.  
TITLE: Preliminary Deoxidation of Pipe Steels  
PERIODICAL: Metallurg, 1961, No. 1, pp. 13-15

TEXT: The cost of deoxidation, carried out in different ways in steel melting practice, is often not taken into account. The effect of some variants of preliminary deoxidizing 10, 20, 35, 45 and  $\frac{1}{4}$  (D) grade pipe steel on the quality and cost price of the metal was investigated at the Azerbaydzhan Pipe-rolling Plant. The investigation was conducted by engineers V. K. Laptev, D. S. Brazaluk and P. P. Podgornyy with the participation of engineers A. F. Borsha, B. I. Podzharskiy, I. A. Vinokurov, S. E. Barkan, A. F. Lysukhina and technicians T. K. Khatayeva and L. I. Arbitman. Test melts were made by the scrap ore process on a solid-charge, compact-floor single-runner open-hearth furnace, fuelled with natural gas and mazut carburization. Preliminary deoxidation was performed by the following four variants: I. Ferromanganese was introduced into the furnace and then short time 12%-ferrosilicon was added. II. First 12%-ferrosilicon and then ferromanganese were added. III. (for 35, 45 and "D" steel). After attaining a carbon content corresponding to the mean level of the grade required, 12%-ferro-

Card 1/4

S/130/61/000/001/001/006  
A006/A001

#### Preliminary Deoxidation of Pipe Steels

silicon and ferromanganese in one mold were added, simultaneously. The metal was tapped after 5 - 7 minutes. IV. (for 2, 3, 10, 20 grade mild steel). After attaining a carbon content of 0.03 - 0.05% above the mean limit of the grade required, ferromanganese was added in an amount assuring the upper limit of manganese content. Correction in respect to manganese and deoxidation with 45% ferrosilicon and aluminum was made in the ladle. The metal was syphon-cast and its quality was checked in the rolling shop. Pipe blanks were subjected to macro and micro analysis. Losses and consumption of the deoxidizer play an important part in the evaluation of the proper deoxidation method. For comparison 20 melts were made by variant I and II each. Results obtained by the four aforementioned variants are given in the table below:

Card 2/4

S/130/61/000/001/001/006  
A006/A001

Preliminary Deoxidation of Pipe Steels

Cost and Loss of Deoxidizers for Different Variants of Deoxidation

Preliminary Deoxidation of Liquid Steel						
Cost and Loss of Deoxidizers for Different Variants of Deoxidation						
Indices	V a r i a n t s					
	I		II		III	IV
	Steel grades					
	10-20	35, 45, D	10-20	35, 45, D	35, 45, D	2, 3, 10, 20
Amount of melts	10	10	10	10	7	10
Manganese loss in %	44.8	27.4	43.0	27.3	18.0	52.6
Ferromanganese consumption in kg/t	4.35	5.3	3.51	4.22	3.7	3.9
Silicon loss %	29.6	31.8	30.9	26.8	28.3	30.9
Consumption of 12% ferro- silicon kg/t	12.23	13.8	12.3	14.6	13.0	-
Consumption of 45% ferro- silicon kg/t	4.81	4.9	4.9	4.7	4.7	6.8
Cost of deoxidizer, rubles/ ton steel (1960 price scale)	13.81	15.63	12.00	14.45	13.00	8.66

Card 3/4

Preliminary Deoxidation of Pipe Steels

S/130/61/000/001/001/006  
A006/A001

It can be concluded that besides conventional methods, deoxidation of pipe steels can be performed with ferromanganese alone in a furnace, or simultaneously with both ferromanganese and 12%-ferrosilicon. When deoxidizing the metal with ferromanganese only, the duration of the process is reduced by 15 minutes and the time of the whole heat by up to 3.0%. When the deoxidizers are added simultaneously into the furnace, deoxidation time is reduced by 5 minutes. When deoxidation is performed with ferromanganese alone, the other conditions being the same, the phosphorus content in the finished steel is below that when deoxidizing with 12%-ferrosilicon. Cost price of steel deoxidized in the furnace with ferromanganese alone is 5 rubles 15 kop. cheaper than steel deoxidized by variant I. There are 2 tables.

ASSOCIATION: Azerbaydzhanskiy truboprokatnyy zavod (Azerbaydzhaniy Pipe Rolling Plant)

Card 4/4

LAPTEV, V.K.

High-speed building-up of new hearth bottoms. Metallurg 6  
no.3:22-23 Mr '61. (MIRA 14:5)

1. Azerbaydzhanskiy truboprolatnyy zavod.  
(Metallurgical Furnaces—Maintenance and repair)



LAPTEV, V.K.; SARUKHANYAN, Z.N.

Work methods of the steelmaker, V.I.Boldyrev. Metallurg 6 no.6:  
30-31 Je '61. (MIRA 14:5)

1. Azerbaydzhanskiy truboprokatnyy zavod im. V.I.Lenina.  
(Steel--Metallurgy)

S/133/62/000/005/003/008  
AO54/A127

AUTHORS: Musa-Zade, M.M., Engineer, and Laptev, V.K., Engineer  
TITLE: At the Sumgait'skiy metallurgicheskiy zavod (Sumgait Metallurgical Plant)

PERIODICAL: Stal', no. 5, 1962, 418 - 419

TEXT: 1) The preliminary reduction of tube steels in the furnace has been investigated. For the grades 10 and 20 ferromanganese alone, for the grades 45 and Д (D) ferromanganese together with 12% ferrosilicium were used. In the first case reduction was shortened by 10 - 15 min and, maintaining the other smelting conditions unchanged, the phosphor content of the finished steel was lower, than if 12% ferrosilicium was included in the reduction process. The production costs of steels reduced by ferromanganese in the furnace work out at 52 kop./ton lower than with the conventional technology. When reducing with ferromanganese + 12% ferrosilicium, the smelting time was reduced by 5 minutes as compared with the conventional process.. Both methods yield more first grade product and decrease rejects. 2) A new method has been applied in sintering the bottom of medium-capacity furnaces with magnesite-chromite crowns, operating on natural gas with

Card 1/3

S/133/62/000/005/003/008  
A054/A127

At the Sumgaitskiy.....

masut carburizing. . At the beginning of the slag formation the temperature of the crown was raised to 1,800°C, that of the lining to 1,250°C. In scorifying the bottom - which took about 5 h - a 13-ton mixture of crushed slag and cinder (50 - 50%) was used. The bottom was sintered with pure magnesite powder, screened through a 8-mesh screen, without separating the smaller fractions. The bottom was uniformly coated with magnesite powder, then heated for 4 - 6 hours and subsequently treated with cinder (20 - 25% of the magnesite powder amount) while heating again for 1.5 - 2 hours. Instead of the conventional 12 layers, only 4 layers (each 50 mm thick) are applied in the new method; the sintering of two furnace bottoms took 40 hours 30 minutes and 33 hours 20 minutes, respectively, instead of 100 hours formerly required; moreover, the new method increased the service life as compared with the conventional technology. 3) To raise the output of blooming mills and tube rolling mills, the ingot weight was increased from 2.5 to 3 tons. This increased the output by 10% and reduced the labor consumption in the open-hearth shop by 16%. Then the ingot weight was raised to 3.5 tons (the bottom section being increased by 40 mm, the height by 75 mm, while the upper section was the same as for the 3-ton ingots; this permitted the use of the conventional dozzles). By casting 3.5-ton ingots, the blooming mill output increased

Card 2/3

At the Sumgaitskiy.....

S/133/62/000/005/003/008  
A054/A127

by 16%, the consumption of refractory material and that of replaceable parts decreased by 12.5%. The technology for casting 4.5-ton ingots is under development. 4) Based on calculations and observations it was found that the holding time of 3.5-ton ingots (with a 530 x 530 mm upper cross section) in the ingot mold could be reduced by 1 hour (to 2 hours 30 minutes - 2 hours 40 minutes), without impairing the metal quality. The temperature of setting the ingots in the soaking pits was raised from 715 to 810°C. The schedule has been applied for 1 year. It decreased metal burning loss in the blooming mill soaking pits by 0.3%, increased the soaking pit output by 6%, cut the fuel consumption by 4%, raised the ingot mold service life by 2 - 4 pourings, the circulation rate of pouring channels by 8% and the transmission capacity of the pouring gate by 12%.

Card 3/3

S/133/63/000/002/001/014  
A054/A126

AUTHORS: Bogolyubov, V.A., Candidate of Technical Sciences, Akhmedov, B.A.,  
Kumysh, I.C., Laptev, V.K., Musa-Zade, M.M. - Engineers

TITLE: Smelting tungsten steel in open-hearth furnaces by using aluminothermic scheelite briquettes

PERIODICAL: Stal', no. 2, 1963, 126 - 129

TEXT: According to a recommendation by TsNIICHM the 35 XT2 CR (35KhG2SV) steel used for drilling pipes should have a 65 kg/mm<sup>2</sup> flow limit and contain: 0.32 - 0.38% C, 1.4 - 1.8% Mn, 0.4 - 0.7% Si, 0.6 - 0.9% Cr, 0.25 - 0.40 W and maximum 0.04% P and S. To establish the most suitable technology for the tungsten-alloyed low-carbon steel, three methods were tested, the steel being alloyed 1) with conventional ferrotungsten (73% W), 2) with a chrome-tungsten master alloy (23 - 29% W), according to the Kirovskiy zavod (Kirov Plant) method and 3) in accordance with the TsNIICHM recommendation, by omitting the use of ferro-alloys in alloying, and by alloying the metal directly with tungsten-containing minerals. The first method ensured a tungsten utilization of 38.3% (re-

Card 1/3

S/133/63/000/002/001/014  
A054/..126

Smelting tungsten steel in open-hearth ....

lated to the liquid metal); the second 36.3 - 59.2%; the third method was found to be the most suitable, therefore a complete technology for the direct alloying method was established. Partly scheelite ( $\text{CaO} \cdot \text{WO}_3$ ) containing aluminothermic briquettes and partly wolframite were used in the tests. The 5 experimental compositions of scheelite briquettes [produced at the Novolipetskiy metallurgicheskiy zavod (Novolipetsk Metallurgical Plant)] contained between 61.08 and 69.82%  $\text{WO}_3$ , and were found more adequate for this process than wolframite. The briquettes were partly added to the melt, partly to the ladle. The heat capacity of the scheelite briquettes varied between 507 and 590 cal/kg. The smelting process is simple and until the moment of tapping closely follows the pattern of low-alloy steel smelting; the time required is shorter; if the smelting process is disturbed for any reason, no tungsten is wasted; the briquettes are simply not fed to the ladle and a conventional "20" grade steel will be produced. The steel alloyed with scheelite briquettes can be used for tubes without any trouble, only the tubes have to undergo a special heat treatment in compartment or roller-type furnaces, to ensure the ГОСТ (GOST) 631-57, 635-57, 633-50 requirements. The heat treatment involves normalization at 850 - 950°C for 3 - 8 1/2 minutes, annealing at 630 - 670°C (2 1/2 - 3 1/2 minutes heating).

Card 2/3

LANSHCHIKOV, M.T.; LAPTEV, V.L., starshiy inzh.

Increase in the protection of automatic block systems of electrified railroad districts against overvoltages caused by lightning strokes. Avtom., telem.i sviaz' 6 no.4:32-33 Ap '62. (MIRA 15:4)

1. Nachal'nik laboratorii signalizatsii i svyazi Sverdlovskoy dorogi, vneshtatnyy korrespondent zhurnala "Avtomatika, telemekhanika i svyaz'" (for Lanshchikov). 2. Laboratoriya signalizatsii i svyazi Sverdlovskoy dorogi (for Laptev). (Railroads--Signaling--Block system) (Electric protection)

LAPTEV, V.M.

LAPTEV, V.M.; PETROVSKIY, N.A., inzh.; KOTLERSKIY, D.I.

Testing the sequence of polarities in a.c. rail circuits. Avtom.,  
telem. i svyaz' no.10:36-37 0 '57. (MIRA 10:11)

1. Laboratoriya signalizatsii i svyazi Oktyabr'skoy dorogi (for Petrovskiy).
2. Starshiy elektromekhanik Moskovskoy distantzii signalizatsii i svyazi Oktyabr'skoy dorogi (for Kotlerskiy).
3. Starshiy inzhener laboratorii signalizatsii i svyazi Sverdlovskoy dorogi (for Laptev).

(Railroads--Communication systems)



LAPTEV, V.M., starshiy inzh.

Measurement of cab signaling code currents in rail networks.  
Avtom., telem.i svyaz' 6 no.1:33-34 Ja '62. (MIRA 15:3)

1. Laboratoriya signalizatsii i svyazi Sverdlovskoy dorogi.  
(Railroads—Signaling)

LAPTEV, V.N., kand.sel'skokhoz.nauk (Astrakhan')

Ways for reducing irrigation norms in irrigating rice.

Gidr.i mel. 17 no.12:10-13 D '65.

(MIRA 19:1)

RUDITSYN, Mikhail Nikolayevich, dots.; LAPTEV, Vladimir Pavlovich,  
starshiy prepodavatel'; RUD', Boris Viktorovich, assistant;  
KUROVSKIY, Ivan Frantsevich, starshiy prepodavatel';  
LYUBOSHITS', Moisey Il'ich, dotsent; PETROVICH, Aleksandr  
Grigor'yevich, starshiy prepodavatel'; BALYKIN, Mikhail  
Kirillovich, assistant; PEN'KEVICH, Vladimir Aleksandrovich,  
assistant; OSHEROVICH, Lyubov' Il'inichna, dotsent;  
CHULITSKIY, Vyacheslav Ivanovich, assistant; Prinimal ucha-  
stiye SIKOLOVSKIY, A.V.; KAPRANOVA, N.V., red.; PESINA, S.A.,  
tekh.n.red.

[Laboratory work on the strength of materials]Laboratornye ra-  
boty po soprotivleniiu materialov. Minsk, Izd-vo M-va vysshego,  
srednego spetsial'nogo i professional'nogo obrazovaniia BSSR,  
1961. 272 p. (Strength of materials--Testing) (MIRA 15:8)

VERETE, Arnol'd Grigor'yevich; LAPTEV, V.T., inzh.-kapitan 1 ranga,  
spetsred.; FRISHMAN, Z.S., red.izd-va; KOTLYAKOVA, I.O., tekhred.

[Marine steam turbines] Sudovye parovye turbiny. Leningrad,  
Izd-vo "Morskoi transport," 1959. 406 p. (MIRA 12:10)  
(Steam turbines, Marine)